

Recovery Plan Action Status

Plan Name: Kentucky Cave Shrimp

Plan Status: Final

Plan Date: 07-Oct-88

Lead Agency: USFWS

Lead Office: Kentucky Ecological Services Field Office

(502)

695-0468)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Kentucky cave shrimp (Palaemonias ganteri)	2	1	Conduct surveys to determine the location and extent of all areas supporting shrimp	Complete	FY 2005	FY 2006	National Park Service, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement	Research: Population Surveys	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	The Graham Springs basin (Warren Co, KY) was surveyed for Kentucky cave shrimp during summer/fall 2005 by Lewis and Associates (Borden, IN); no shrimp were found but a diverse cave fauna was documented.
Kentucky cave shrimp (Palaemonias ganteri)	2	2.1	Conduct life history research to determine sex ratios, fecundity, survival rate, mortality rate, rate of increase, turnover rate, longevity, food supply, viable population size, and protection needed to ensure continued existence of the species.	Partially Complete	Prior to FY 1995		National Park Service, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement	Research, Research: General, Research: Other Information	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	Can be combined with Task No. 1 to obtain at reduced cost. Genetics project by Iowa State Univ (Dr. Kevin Roe) and Univ. of Alabama (Dr. Bernard Kuhajda) is planned for FY09 at Mammoth Cave NP. They plan to remove an appendage (non-lethal activity) from approx. 25 inds from several different spring basins in MCNP. Results will be used to determine relationships within the genus but also to determine gene flow between/within populations. The study will also provide updated info on species status.

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Kentucky cave shrimp (Palaemonias ganteri)	2	2.2	Continue hydrological studies of the Mammoth Cave area	Partially Complete	Prior to FY 1995		National Park Service, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement, Kentucky Division of Water	Research, Research: General	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	
Kentucky cave shrimp (Palaemonias ganteri)	2	2.2.1	Continue the delineation of groundwater basins	Partially Complete	Prior to FY 1995		National Park Service, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement, Kentucky Division of Water	Research, Research: General	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	
Kentucky cave shrimp (Palaemonias ganteri)	1	2.3	Determine the biotic and abiotic water quality parameters essential to the survival of the species	Partially Complete	Prior to FY 1995		National Park Service, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement, Kentucky Division of Water	Research: Demographic Studies, Research: General, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques, Research: Other Information, Research: Population Surveys	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	
Kentucky cave shrimp (Palaemonias ganteri)	2	3.1	Determine the effects of pesticide contamination	Not Started			National Park Service, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement	Work type not yet selected	Labor type not yet selected	
Kentucky cave shrimp (Palaemonias ganteri)	2	5.2	Evaluate mechanism for preventing pollution from private septic system and implement actions required to prevent pollution of cave systems if necessary.	Not Started			National Park Service, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement, Kentucky Division of Water	Work type not yet selected	Labor type not yet selected	FY 89 & 90 cost unknown
Kentucky cave shrimp (Palaemonias ganteri)	2	5.3	Reduce or eliminate siltation from artificially high water levels	Not Started			National Park Service, U.S. Army Corps of Engineers, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement, Kentucky Division of Water	Work type not yet selected	Labor type not yet selected	FY 88, 89, & 90 cost unknown

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Kentucky cave shrimp (Palaemonias ganteri)	2	5.4.1	Develop and implement a plan to ensure that drilling for oil and natural gas is conducted in a manner which protects the cave system.	Not Started			USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement	Work type not yet selected	Labor type not yet selected	FY 89 cost unknown
Kentucky cave shrimp (Palaemonias ganteri)	2	5.4.2	Develop and implement a plan to ensure that agricultural and forestry practices are conducted in a way which does not adversely affect the cave system.	Not Started			National Park Service, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement, U. S. Department of Agriculture - Soil Conservation Service	Work type not yet selected	Labor type not yet selected	FY 89 cost unknown. Can be combined with Task No. 4.4.1 to reduce costs.
Kentucky cave shrimp (Palaemonias ganteri)	3	8.3	Produce and conduct a program to develop public appreciation of karst terrains, water quality, the unique ecosystems and their biota, perturbation effects, endangered species legislation, and species protection/recovery.	Not Started			National Park Service, USFWS Regional Office 4 - Atlanta, U.S. Fish and Wildlife enhancement	Work type not yet selected	Labor type not yet selected	Can be combined with Task No. 8.2 to reduce costs.